

ABSTRACT

[Abstract]

[Object] Providing a ball endmill that is capable of restraining its vibration thereby permitting a cutting operation to be performed at an increased feed rate with an increased depth of cut and leading to an improvement in efficiency of the cutting operation.

[Measures for achieving the object] A ball endmill 1 is constructed such that each ball-nosed end cutting edge 6a-6c includes first and second portions 6a1-6c1, 6a2-6c2 having respective first and second radii R_1 , R_2 of curvature which are different in value from each other. This construction causes a cutting resistance (cutting torque) exerted by the workpiece 20 to radially act in a direction that is different in the first and second portions 6a1-6c1, 6a2-6c2 of each ball-nosed end cutting edge 6a-6c. Consequently, a feed rate and a depth of cut can be increased whereby the cutting efficiency can be improved.

[Selected figure] Fig. 2